The PMO states:
There shall be no partial removal of milk from milk storage/holding tanks by the bulk milk hauler/sampler, except partial pickups may be permitted when the milk storage/holding tank is equipped with a seven (7) day recording device complying with the specifications of Appendix H or other recording device acceptable to the regulatory agency, provided the milk storage/holding tank shall be clean and sanitized when empty and shall be emptied at least every seventy-two (72) hours. In the absence of a temperature-recording device, partial pickups may be permitted as long as the milk storage/holding tank is completely empty, clean and sanitized prior to the next milking. In the event of an emergency situation, such as inclement weather, natural disaster, etc., a variance may be permitted at the discretion of the regulatory agency.

This allowance for partial pickups in an emergency situation, such as discovering a producer has more milk today than the bulk tank truck will hold, does not mean that a week from today, this same situation still qualifies as an emergency. As milk supplies decrease and increase on routes, hauling schedules must adapt to meet them. A producer cannot act as an ongoing balancing tank for a hauler. In this same vein, a producer must understand an increase or decrease in production, or a neighbor's production for that matter, may mean a change in pickup schedule. Location, milk production and number of producers on a load all influence the optimum route by which any group of producers can be picked up and stay within the requirements of the PMO.

Pasteurization – Time, Temperature, and Pressure

Pasteurization is the process of heating every particle of milk or milk product to the minimum required temperature (for that specific milk or milk product), and holding it continuously for the minimum required time in equipment properly designed and operated, according to the Grade A Pasteurized Milk Ordinance. These time and temperature requirements are vital in the safe processing of milk and milk products. Legally-defined temperatures and times for processing milk or milk products are increased when the butterfat is 10 percent or more, when sweeteners and flavorings are added, and when viscosity is increased. Other considerations in pasteurization are proper pressure relationships in specific processing equipment configurations. For every unique dairy pasteurization system in the state, the MDA pasteurization specialist conducts tests with these three relationships in mind.

Vat pasteurizers must hold product at the minimum pasteurization temperature for no less than 30 minutes. The minimum pasteurization temperature for milk is 145°F. For flavored milks and creams the minimum is 150°F. Ice cream mixes and eggnog must be held at a minimum of 155°F. The air space above the liquid is an important item to consider for vat pasteurization. This air space is required to be 5°F above the legal pasteurization temperature of the liquid. There are no pressure relationships to consider for vat pasteurization.

In High Temperature Short Time (HTST) pasteurizers the hold time is reduced to 15 or 25 seconds. The temperature at 15 seconds hold time is 161°F for milk. For flavored milk and creams it is 166°F. Ice cream and eggnog must be held at 180°F. The most commonly used time and temperature for ice cream mix and eggnog is 175°F for 25 seconds. The viscosity of products is an important consideration in pasteurization. Thin products in a pipeline flow in a turbulent or mixed stream. Thick products flow in a laminar stream where the center core can be moving twice as fast as the outside edges, thus the time or temperature for pasteurization is increased to compensate for thicker products. HTST systems often have pressure relationships to consider dependent on equipment setup.

For the convenience of dairy farmers and those having dairy questions, Michigan is divided into two regions.

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Dairy Section
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Grand Rapids Regional Office
Dairy Section
State Office Building, Unit 1• 350 Ottawa NW
Grand Rapids, MI 49503-2348
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Questions may also be directed to:
Susan Esser, Manager
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www.michigan.gov/mda

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Dairy Digest

Food & Dairy Division

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Dairy Administrative Fines

In 2001, the Michigan Department of Agriculture (MDA), Food and Dairy Division, along with dairy industry stakeholders, updated the milk safety laws governing the dairy industry. This consolidation simplified the requirements into two separate laws, the Grade A Milk Law of 2001 and the Manufacturing Milk Law of 2001. The ability to assess administrative fines was included in the 2001 revisions of the dairy laws bringing them into alignment with the Michigan Food Law of 2000.

The MDA dairy program has assessed administrative fines for drug residue violations for many years. But we have not applied fines to other areas of the dairy laws. We are hopeful that this additional tool will allow us to make better use of our dairy inspector resources and help us gain better compliance from those who repeatedly or substantially violate Michigan's milk safety laws.

Beginning July 1, 2007, MDA will track law violations for dairy farms, dairy processing plants, bulk milk haulers, milk transportation companies and other licensed dairy facilities to determine if a sanction is warranted. The following are some examples of situations where an administrative fine may be levied:

- In addition to a permit suspension. For example, if a permit is suspended for violations such as illegal somatic cell counts, bacteria counts, filthy milking equipment or filthy farm conditions, a fine may be assessed in addition to the permit suspension.
- If the same item(s) are debited on a second reinspection. For example, if a plant is put on reinspection because the floor needs repair and the roof is leaking, when these items are not corrected by the second reinspection, a fine may be assessed.
- When an inspection item has been debited four times over a two-year period or less. For example, if a farm is marked for milkhouse cleanliness on four inspections over a 22-month period, a fine may be assessed.
- Other serious violations. For example, if a milk hauler picks up milk from unapproved containers such as garbage cans.

The range of the assessed fine will be between $100 and $1,000 per violation based on the severity or frequency of the violation. The costs of an investigation may also be added to the fine.

Regional supervisors will review the records of dairy farms, dairy processing plants, bulk milk haulers, milk transportation companies and other licensed facilities. Upon review, they will submit recommendations to the Lansing office as to the amount of the fine to be levied, based on a structured formula. The Food and Dairy Division's Lansing office will send to the license or permit holder a Notice of Administrative Fine listing the violation(s), the amount of the administrative fine to be paid, and the process for appeal. Failure to pay an administrative fine may result in license revocation, permit suspension or other follow-up action.

Violations will be noted on the inspection reports left at establishments and, in the case of violations such as illegal somatic cell counts, through the current Warning Notice process. Your MDA dairy inspector will issue a warning when reinspection items could lead to a fine.

MDA's goal is to achieve compliance. Correcting items marked on the inspection sheet by your MDA dairy inspector and compliance with the dairy laws will reduce your chances of being assessed an administrative fine. Payment of a fine does not eliminate the requirement for correcting the violation. Your MDA dairy inspector will verify corrections.

This new policy will not affect the vast majority of producers, dairy processing plants, bulk milk haulers and others who are maintaining their operations in conformance with state law. For additional information, please contact your MDA dairy inspector. Copies of the administrative fine policy are available at www.michigan.gov/mda-dairy.

2006 Enforcement and Investigations

In fiscal year 2006, the Dairy Section conducted the following enforcement activities beyond routine inspection work:

Consumer Complaint Investigations	17
Enforcement Letters	234
Compliance Reviews	16
Prosecutions	0
Seizures	2
Total Permit Suspensions	171
Total Pounds of Contaminated Milk Disposed	3,121,968

The rationale for these additional enforcement actions include, but are not limited to drug residue, illegal somatic cell test results, illegal bacteria test results, and unsanitary dairy farm or milk processing plant conditions.

Keeping the Farm Environment out of the Plant Environment

With an increased interest in on farm processing plants, keeping the farm environment out of your dairy plant plays an important role in the production of quality dairy products.

Dairy plant personnel and visitors to the premises should observe and practice the following measures:

- Always approach the dairy plant with concern for disease transmission.
- Avoid driving or walking through barnyards, feed lots, manure, and feed storage or holding areas.
- At facilities where the dairy plant is on the same premise as the dairy farm, people should visit the dairy plant prior to visiting the dairy farm.

Location

When planning to build a dairy processing facility, local, state and federal food and dairy regulations along with labor, environmental protection, zoning and tax laws should all be taken into consideration. The environment surrounding a dairy processing facility is an extremely important concern when choosing a location. A dairy plant located in close proximity to livestock presents special problems and, in such instances, MDA recommends the following:

- Accessibility: Provide easy access to the plant for trucks delivering supplies and shipping product. This access should avoid crossing through areas contaminated by livestock waste. Your livestock waste should remain on your premises and not end up at the truck's next stop.
- Prevailing winds: The processing areas should not be downwind to strong odors from animal housing, feed and manure storage. Adequate air filtering devices must be installed on air inlet fans to prevent the entrance of dirt and dust. Exhaust outlets must be screened or have self-closing louvers to prevent the entrance of insects when not in use.
- Proximity to livestock: The greater the distance you can put between your milk processing facility and your livestock, the fewer problems you will have. Visitors to your facility may enjoy seeing your animals but maintaining the cleanliness needed in a processing plant is difficult when animals are just outside the entrance.
  - Insect control is another challenge when animals and the manure they produce are close by.
  - Animal odors and dust created by feeding and bedding also create quality issues.
- Runoff: Provide a means to direct water running from animal housing during heavy rains away from plant traffic areas to minimize the chance of contaminating the processing area and products.

Traffic Patterns for Plant Personnel

It is important to maintain a clean environment in and around a dairy plant. This can only be accomplished by controlling the cleanliness of the people who walk through and work in your facility.

Employees who work with or around livestock should not be allowed to enter the processing plant without a shower and a complete change of clothes and footwear. It is extremely important to strictly maintain this policy to prevent the spread of pathogenic organisms commonly found in farm environments.

Post pasteurization contamination of dairy products is a leading cause of product recall. Bacteria such as *Listeria monocytogenes, Salmonella, Campylobacter, Coliform* and many others are serious public health threats. Stringent efforts must be made to minimize the possible entrance of these pathogens into the dairy plant environment.

Sanitizing footbaths are recommended at each plant entrance, but these should never be used as the only method of pathogen protection. Plant personnel cleanliness is of prime importance. Clean clothes and footwear, as well as adequate hair and beard covering, is required for anyone working in or visiting the plant.

Grade "A" Survey Scoring

There are several factors – both large and small - which play a role in compiling a producer's Grade "A" survey score. Everything from an open milkhouse door, broken window to piles of manure in the cowyard - - all factor in to the final score during the survey process.

Here are some examples of how poor maintenance contributes to the final score:

- Well cap off or a hose in a stock tank (5 points)
- Milkhouse door open (2 points)
- Dogs or cats in the milkhouse (4 points)
- Broken hoseport or window (1 point)
- Trash or excessive weeds around the milkhouse (2 points)
- Dirt, excessive water or the like under the hoseport (2 points)
- Dirty cows (5 points)
- Piles of manure in the cowyard (3 points)
- An agitator shield missing from a bulkheaded bulk tank (3 points)

Producers can increase their score by doing some quick and easy maintenance during their daily activities. Things like mowing around the milkhouse will keep the weeds down or using a flat head shovel to clean the area under the hoseport removing weeds or grass. If the milkhouse door is propped open because of ventilation problems, screened windows can provide the needed airflow. Producers should not use common items such as rocks, bricks, buckets, wires or ropes to prop the milkhouse door open.

Also, be sure to provide an approved stock tank float or a pipe within a pipe arrangement for watering cattle and instruct everyone to use it. A single strand of electric wire is all that is needed to fence off temporary piles of manure. Scrape the cowyard as often as necessary to keep it clean. This is usually more than once a week and sometimes as often as twice a day.

Putting these few maintenance tips into daily practice will help you get a passing score during your next Grade "A" survey.

MSU Product Center

The MSU Product Center for Agriculture and Natural Resources (ANR) was established in Spring, 2003 utilizing funds from the Michigan Agricultural Experiment Station and Michigan State University Extension to improve economic opportunities in the Michigan agriculture, food and natural resource sectors. The Product Center can help you develop and commercialize high value, consumer-responsive products and businesses in the agriculture and natural resource sectors. Whether you are a budding entrepreneur or an established company, the Center is your key to the front door of MSU's vast and varied technical expertise, research, outreach, and educational services. Chris Peterson, Nowlin Chair of Consumer-Responsive Agriculture in the Department of Agricultural Economics at Michigan State University, is the Center's director. The Center has offices located on Michigan State University's campus and off campus in East Lansing.

Tom Kalchik**,** Associate Director for the MSU Product Center for ANR, directs Client Services and the ANR Innovation Counselor Network.
To contact Client Services:
Online at www.productcenter.msu.edu
Call Client Services at (517) 432-8750
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East Lansing, MI 48823

News For Those Who Move The Milk

Changes in the federal Pasteurized Milk Ordinance (PMO) require a hauler put his/her name and hauler identification number on the copy of the weight slip left at the farm. The full name should be the name found on the hauler's license, not a nickname. Writing should always be legible. Recent Grade 'A' surveys indicate not all haulers understand that it is necessary to write both their names and hauler identification number on the farm weight slips.

Road restrictions have been removed and the bad weather of winter has ended, leaving behind us the typical reasons cited for doing partial pickups of farm bulk tanks.*(continued next page)*